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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/786,973	02/25/2004	James Strepek	D5438	4115
30409	7590	05/13/2005	EXAMINER	
INTERNATIONAL ENGINE INTELLECTUAL PROPERTY COMPANY 4201 WINFIELD ROAD P.O. BOX 1488 WARRENVILLE, IL 60555			RIDDLE, KYLE M	
			ART UNIT	PAPER NUMBER
			3748	

DATE MAILED: 05/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/786,973	<b>Applicant(s)</b> STREPEK, JAMES	
	<b>Examiner</b> Kyle M. Riddle	<b>Art Unit</b> 3748	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 February 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |  |
|---|--|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input checked="" type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)                        | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____  |

## DETAILED ACTION

### *Response to Amendment*

#### *Drawings*

1. The drawings filed on 25 February 2004 are acceptable subject to correction of the informalities indicated on the attached "Notice of Draftsperson's Patent Drawing Review," PTO-948. In order to avoid abandonment of this application, correction is required in reply to the Office action. The correction will not be held in abeyance.

Applicant made no mention of the above PTO-948 in the amendment received 20 December 2004. Therefore, for clarification, the examiner will attach another copy of the same form herein.

#### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-10, 13-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Perez et al. (U.S. Patent 6,273,042) in view of Carroll, III et al. (U.S. Patent 5,542,315).

Perez et al. disclose a rocker arm assembly comprising:

- a valve 47 in the head of an engine cylinder 49 being intake or exhaust (column 3, lines 30-35 and Figure 1);
- a rocker arm 12 (column 15, line 62 and Figures 1 and 2);

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- a rocker actuation mechanism in the form of a push rod 22 and cam 26 (column 2, lines 5-10 and Figures 1 and 2);

- a valve actuation device or valve 144 (column 14, lines 52-55 and Figure 15);

- a ball 122 secured to a rocker arm 102 (column 10, lines 58-59) contacting the inner cavity and surface 148 of a socket 124 (column 11, lines 50-58);

- a resilient retainer 216 positioned in an external groove or annular recess 220 (column 16, lines 3-7) to retain the socket 124 on the rocker ball 122 (column 13, lines 7-9);

- a foot extension or bottom flange on socket 124 extending below the annular recess 220 and having a cross-sectional area greater than the annular recess 220, the annular recess 220 being between the foot extension and the cavity opening, the foot extension continuously connected to a valve actuation device (Figure 15);

- a ball portion having a pin extension or neck 134 extending to an insert 138 received in a mating pocket in the end 120 of the rocker arm 102 (column 11, lines 1-4).

Perez et al. fail to disclose a wire-like retention element connected to a ball portion and a socket portion, a flange on the pin extension, a pin segment and loop and a foot segment and loop of the retention device, and certain cross-sectional relationships of components.

Re claims 1, 2, 4, 5, 16, 17, and 20, Carroll, III et al. teach a wire-like retainer element 16 connected to a ball portion and socket portion (column 5, lines 1-6, Figures 1-4).

Re claims 3, 6, 8, 10, 18, and 19, Carroll, III et al. teach ball and socket assembly for actuated members such as valves and valve crossheads (column 5, lines 63-66) comprising a ball portion 18 with a pin extension 12 and flange or annular ledge 28 between the pin extension and interface surface of a socket and having a cross-section significantly larger than the pin extension

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12, a socket 20 with an annular groove below annular ledge 22, a spring steel retainer element 16 comprising a foot segment and foot loop 24 engaging the groove below annular ledge 22, and a pin segment and pin loop 26 engaging the pin extension just above the flange or annular ledge 28 (column 5, lines 1-19 and Figures 1-4).

Re claims 7 and 9, Carroll, III et al. teach the ball and socket assembly where the pin loop and interface surface have smaller cross-sections than the flange or annular ledge 28 (Figures 1-4).

Re claims 13-15, Carroll, III et al. teach the foot segment extending at least partially along a circumference of the external groove below the annular ledge 22, the pin segment extending at least partially along a circumference of the pin extension 12, and a pin segment which forms a plurality of windings around the pin extension 12 (Figures 1-4).

It would have been obvious to one having ordinary skill in the art at the time of the invention was made, to have utilized the teaching by Carroll, III et al. in the ball and socket assembly of Perez et al., since the use thereof would have provided a modified resilient retaining member of lower mass and more flexibility.

4. Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Perez et al. in view of Carroll, III et al., as applied to claim 6, above, and further in view of design choice.

Perez et al., as modified by Carroll, III et al., disclose the ball and socket assembly cited above, however, fail to specifically cite certain cross-sectional relationships.

With regard to applicant's claim directed to the socket having a smaller cross-section at the exterior groove than the entrance to the ball cavity or foot extension, it appears from the drawings that both Perez et al. and Carroll, III et al. have external grooves meeting this criteria,

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thereby suggesting the encompassing of the claimed limitation. Moreover, there is nothing in the record which establishes that the application of such specific cross-sectional relationships represents a novel or unexpected result (See *In re Kuhle*, 526 F.2d 553, 188 USPQ 7 (CCPA 1975)).

***Response to Arguments***

5. Applicant's arguments filed 20 December 2004 have been fully considered but they are not persuasive.

6. Applicant asserts at the bottom of page 9 and top of page 10 that the Perez et al. reference retainer is not connected to the ball portion, and while there is limited contact with the ball portion and retainer, the combination of the Perez et al. and Carroll, III et al. references clearly show this limitation. Also, Carroll, III et al. teach the use of a wire-like retainer. The foot extension described in the second to last paragraph on page 10 is interpreted by the examiner in the broadest sense in light of the specification, prior art, and ordinary usage, and the foot extension cited in the Perez et al. reference, above, is determined to be substantially equivalent to the claimed limitation. Although the applicant has amended the claims to overcome the 35 U.S.C. 102(b) rejection, the combination of the above two references make obvious the claimed invention as set forth above.

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after

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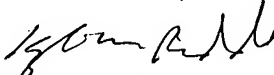
the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

*Communication*

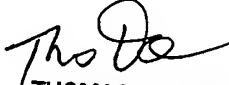
8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kyle M. Riddle whose telephone number is (571) 272-4864. The examiner can normally be reached on M-F (07:30-5:00) Second Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Denion can be reached on (571) 272-4859. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Kyle M. Riddle  
Examiner  
Art Unit 3748

kmr

  
THOMAS DENION  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3700